

Name: _____

at1118paper: Complete the Square (v408)

Example

By completing the square, find both solutions to the given equation:

$$x^2 - 44x = -468$$

Add $(\frac{-44}{2})^2$, which equals 484, to both sides of the equation.

$$x^2 - 44x + 484 = 16$$

Factor the left side.

$$(x - 22)^2 = 16$$

Undo the squaring. We need to consider both $\pm\sqrt{16}$.

$$x - 22 = -4$$

or

$$x - 22 = 4$$

$$x = 18$$

or

$$x = 26$$

Question 1

By completing the square, find both solutions to the given equation:

$$x^2 - 6x = 775$$

Question 2

By completing the square, find both solutions to the given equation:

$$x^2 - 46x = 2175$$

Question 3

By completing the square, find both solutions to the given equation:

$$x^2 - 48x = 1188$$

Question 4

By completing the square, find both solutions to the given equation:

$$x^2 + 42x = -425$$

Question 5

By completing the square, find both solutions to the given equation:

$$x^2 - 28x = -192$$

Question 6

By completing the square, find both solutions to the given equation:

$$x^2 - 56x = -703$$